



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,661	03/19/2001	Takeshi Fujii	Q61851	9052

7590 06/14/2005
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

POON, KING Y

ART UNIT	PAPER NUMBER
----------	--------------

2624

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/810,661

Applicant(s)

FUJII ET AL.

Examiner

King Y. Poon

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8, 9, 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 6, 7 and 10-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The amended specification filed on 1/14/2005 has been entered.

Claim Objections

3. Claims 11-13 are objected to because of the following informalities: Claim 11 recites the limitation "detecting a preceding recording duty ratio of the image at a position scanned later than said present recording duty ratio detecting means in the main scanning direction" in lines 9-11. This appears to be a typo because the position of the image and the position of present recording duty ratio detecting means are unrelated. The position of the image scanned is on a photosensitive medium and the present recording duty ratio detecting means is not on the photosensitive medium and is not to be scanned. Appropriate correction is required.

The examiner has search the limitation "detecting a preceding recording duty ratio of the image at a position scanned later than said present recording duty ratio detecting means in the main scanning direction" but can not found a proper prior art rejection.

Regarding claims 12-13: Claims 12-13 are objected to because they depend on claim 11.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 8 recites the limitation "applying a random number to the detected recording duty ratio" in line 3. There is insufficient antecedent basis for this limitation in the claim.

It is unclear the detected recording duty ratio is referring to the detected recording duty ratio of a given area of an image of claim 5 or the detected recording duty ratio of the image of claim 1.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 5, 14, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue (US 5,731,884).

Regarding claims 1, 14: Inoue teaches an apparatus (fig. 1) for recording an image by scanning a photosensitive medium (column 5, lines 44-50) with a light beam generated based on an image signal (image column 4, lines 30-36), comprising: recording duty ratio detecting means (controller 12 detects the supplied dot area percentage data, column 4, lines 30-40) for detecting a recording duty ratio (dot area percentage, column 2, lines 10-20) of an image (dot area, e.g., fig. 7) to be recorded on the photosensitive medium based on the image signal; and light beam intensity modulating means (column 5, lines 30-40) for modulating the intensity of the light beam based on the detected recording duty ratio (fig. 5, fig. 6).

Regarding claim 2: Inoue teaches wherein said photosensitive medium is of such a nature that an area irradiated with light remains as an image (column 5, lines 49-50), and said light beam intensity modulating means comprises means for modulating the intensity of the light beam to a higher level in a highlight area of the image.

Note: A high light area is a black dot in a white area. In order for Inoue to record a black dot image, Inoue must modulate the light intensity to a higher level compare to no black dot to be recorded, (column 5, lines 20-30).

Regarding claims 3, 15: Inoue teaches wherein said highlight area comprises a highlight area (see one black dot is has only 23.5 %, fig. 9) smaller than 25 % of all gradations of the image recorded on said photosensitive medium.

Regarding claim 5: Inoue teaches wherein the recording duty ration detecting means comprises means (17, fig. 1, that detects S0 form the measuring unit) for

Art Unit: 2624

detecting a recording duty ratio corresponding to a given area in the image recorded on the photosensitive medium.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (US 5,731,884) as applied to claim 1 above, and further in view of Persoon et al (4,501,016).

Regarding claim 4: Inoue does not teach wherein the recording duty ratio detecting means comprises a low pass filter.

Persoon, in the same area of detecting gray image data (column 5, lines 60-65), teaches it is well known in the art to use a low pass filter to reduce noise in an image signal (column 6, lines 1-5).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Inoue to include: a low pass filter in the controller of Inoue to reduce image signal noise.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (US 5,731,884) as applied to claim 1 above, and further in view of Bosschaerts (US 5,783,356).

Inoue does not teach: wherein said light beam comprises a plurality of light beams for simultaneously scanning said photosensitive medium to record the image thereon, and wherein said recording duty ratio detecting means comprises a plurality of recording duty ratio detecting means associated respectively with images recorded on the photosensitive medium based on respective image signals to generate said light beams, and said light beam intensity modulating means comprises a plurality of light beam intensity modulating means associated respectively with recording duty ratios detected by said recording duty ratio detecting means.

Bosschaerts, in the same area of reproducing a contone image on a photosensitive medium using light beams, teaches to simultaneously using multiple light beams to record images onto the photosensitive medium (fig. 7B)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Inoue to include: simultaneously using multiple light beams to record images onto the photosensitive medium.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Inoue by the teaching of Bosschaerts because it will speed up the image recording process.

Note: As previously discussed, in claim 1, Inoue teaches recording duty ratio detecting means for detecting a recording duty ratio of an image; and light beam intensity modulating means (column 5, lines 30-40) for modulating the intensity of the light beam based on the detected recording duty ratio (fig. 5, fig. 6).

Since Inoue needs to detect multiple images and requires multiple light beams to record the detected images onto the photosensitive medium simultaneously, after the modification, Inoue requires multiple recording duty ratio detecting means for simultaneously detecting the images, and multiple light beam intensity modulating means for simultaneously creating the multiple light beams for simultaneously recording the images.

Allowable Subject Matter

12. Claims 6-7, 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is 571-272-7440. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 8, 2005


KING Y. POON
PRIMARY EXAMINER